PATENT SPECIFICATION

Application Date: Mar. 19, 1920. No. 8165/20. **164,869**

Complete Accepted: June 20, 1921.

COMPLETE SPECIFICATION.

Armored Cable.

I, COLVIN LEE JOHNSON, Engineer, of 2309, Archer Avenue, Chicago, State of Illinois, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to armored cables, and, although not restricted to such use, is particularly adapted for use in connection with automobile tire locks or for other purposes where a padlock and chain is ordinarily employed.

Cables as ordinarily constructed are readily cut through by files, hack saws or other cutting instruments, since hardness and flexibility are not ordinarily associated.

It is an object, therefore, of the present ~~invention to provide a cable having a very~~ hard surface and also possessing very considerable flexibility.

Another object is to provide a flexible casing of hardened steel for a cable of stranded wire or the like.

A further object of the invention is to provide means for retaining the flexible casing in position on the cable.

Other and further important objects of this invention will be apparent from the disclosures in the specification and drawings.

The invention (in a preferred form) is illustrated in the accompanying drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a side view of an armored cable embodying the features of the present invention.

Figure 2 is a side view of an automobile lock embodying a cable as shown in Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a section on the line 4—4 of Figure 2.

Figure 5 is a central longitudinal section through a part of the cable shown in Figure 1.

Figure 6 is a side view of a modified form of armored cable.

Figure 7 is a central longitudial section through a part of the cable shown in Figure 6.

Figure 8 is a side view of a portion of a further form of armored cable.

Figure 9 is a section on the line 9—9 of Figure 8.

As shown on the drawings:

The armored cable, generally designated as 1, comprises a central flexible cable, preferably of flexible stranded wire 2, such as steel, around which are arranged rings 3 of hardened steel. Each ~~ring is machined and then case-hardened~~ afterwards.

The ends of each ring are spherically formed so that each ring may rock or rotate on the rings adjacent thereto. Further, as the point about which the rings turn about each other by virtue of their spherical engaging surfaces is some distance from the ends of the rings the latter would normally tend to bind or cut the cable 2. Preferably, therefore, at least one end of the central aperture through each ring is countersunk or flared outwardly or otherwise enlarged, as shown more particularly in Figures 5 and 9. The construction shown in Figure 9 is particularly advantageous since the conical shaped aperture enables the ring to be accurately centered at one end on the cable while allowing full play for the cable and ring at the other end.

These rings 3 are held in place on the cable 2 by means of terminals 4 and 5, secured to the ends of the cable 2 in any convenient manner. As shown, these ter-

[*Price* 1/-]

minals are hollow and the hole therethrough is countersunk at its outer end so that the end of the cable may be spread out and secured to the sides of the hole by welding, soldering, brazing or the like. When the cable 2 is of steel wire and the terminals are also steel the two may be welded together by an oxy-acetylene torch, using nickel or a high carbon steel. This welding is performed prior to the hardening of the terminals so that when the latter are case-hardened the ends of the cables are also case-hardened so that the terminals cannot be detached by drilling out the end of the cables embedded therein.

As the chief purpose of the rings 3 is to prevent access to the inner cable by cutting tools or to prevent wear of the inner cable, the external form of these rings 3 may be varied within wide limits without detracting from their utility. Thus, if desired the rings may be made oval in form, as shown in Figures 6 and 7. In other cases the rings may be formed with a series of annular projections thereon, as indicated in Figures 8 and 9. The latter form of construction is particularly adapted for use with locking devices.

Similarly the external form of the terminals 4 and 5 may be changed as required. The form shown in Figure 1 is especially suited for use in the tire lock 6, shown in Figures 2 and 3. The construction of this tire lock is not described here as it forms no part of the present invention.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. An armored cable comprising a cable and a series of rings having spherical contact surfaces and placed around the cable, the spherical contact surfaces permitting the cable to bend.

2. An armored cable, as set forth in Claim 1, wherein the rings surrounding the cable are made of hardened steel to prevent unauthorized cutting of the cable.

3. An armored cable, as set forth in Claim 1, including terminals secured to each end of the cable and adapted to retain the series of rings in position on the cable.

4. An armored cable, as set forth in Claim 1, wherein the rings are formed with flaring mouths to facilitate the nesting of adjacent rings in each other when the cable is being bent.

5. An armored cable substantially as described and shown with reference to Figures 1 to 5, and for the purpose set forth.

6. An armored cable substantially as described and shown with reference to Figures 6 and 7, and for the purpose set forth.

7. An armored cable substantially as described and shown with reference to Figures 8 and 9, and for the purpose set forth.

Dated this 17th day of March, 1920.

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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1921.

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1

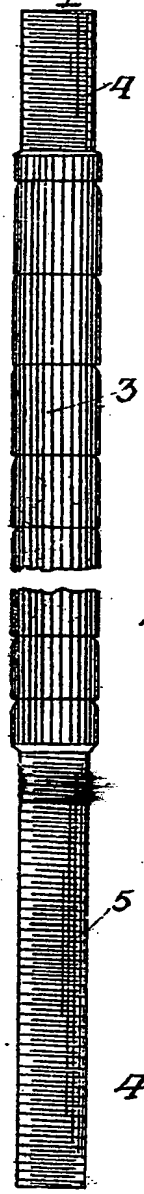


Fig. 2

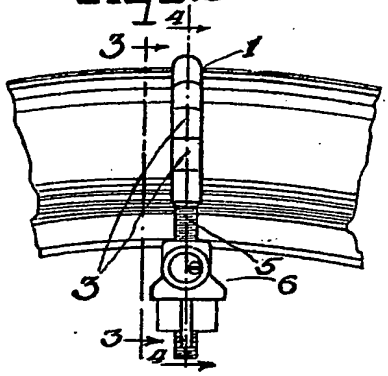


Fig. 3

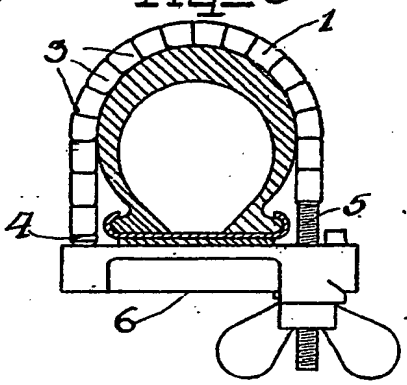


Fig. 4

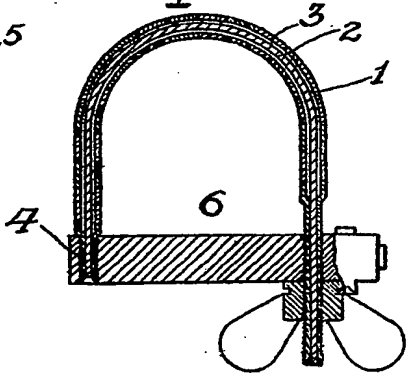


Fig. 5

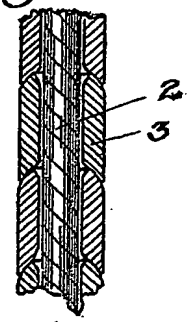


Fig. 6

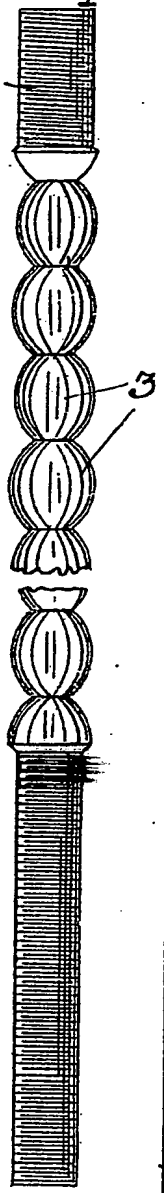


Fig. 7

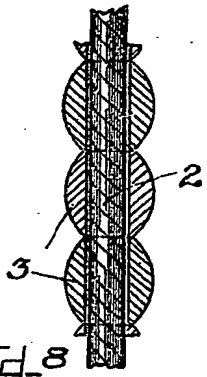


Fig. 8

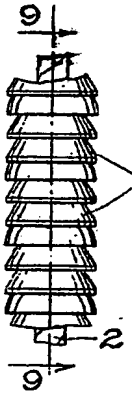
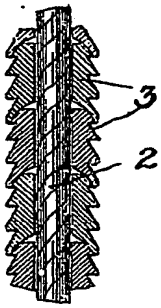


Fig. 9



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